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# Slovenian Banking Sector Experiencing the Implementation of Capital Requirements Directive

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## **Abstract**

Like all the member states of the European Union, Slovenia was also obligated to implement EU Directives 2006/48/EC and 2006/49/EC into national banking legislative. Basel II rules were implemented into Slovenian legislative in December 2006 and have been valid from 1<sup>st</sup> of January 2007. Before that, there have been some activities in order to perceive the consequences of Basel II on Slovenian banking sector and an attempt of the regulator to discuss possible changes in the regulation of Slovenian banks. The paper exploits the implications and consequences of Basel II for Slovenian banking sector. In order to gain an insight into Slovenian banks a survey was conducted just three months before the implementation of Basel II.

**JEL classification:** G21, G28, G32



## 1. Introduction

The revised framework for the International Convergence of Capital Measurement and Capital Standards, also known as Basel II, was endorsed on 26 June 2004 by the central bank governors and head of the banking supervisory authorities of the G10 countries. It represents the conclusion of the process which started with the publication of the first proposal for a new capital accord in June 1999, and two subsequent consultative packages in 2002 and 2004. The Basel II framework also forms the basis for the legislative changes underway in the EU. The old EU rules, dating from 1988, were contained in the Capital Adequacy Directive (1993) and the Consolidated Banking Directive (2000), which are updated by the Capital Requirements Directive (CRD). These changes represent a response to the increasingly apparent shortcomings of the capital framework. Basel II introduces more sophisticated approaches for calculating credit risk capital requirements, and aims to reduce the scope for regulatory capital arbitrage, allow for credit risk mitigation techniques, introduce a capital charge for operational risk as well as greater transparency through comprehensive disclosure requirements.

Like all the member states of the European Union Slovenia was also obligated to implement EU Directives 2006/48/EC and 2006/49/EC into national banking legislative. The directives are renewed EU Directives 2000/12/EC relating to the taking up and pursuit of the business of credit institutions and Council Directive 93/6/EEC on the capital adequacy of investment firms and credit institutions. In that way Slovenia adopted New Capital Accord (Basel II) through EU Directives. As an EU member state Slovenia could not decide upon a cost/benefit analysis of Basel II consequences on her national banking sector.

Basel II rules were implemented into Slovenian legislative in December 2006 and have been valid from 1<sup>st</sup> of January 2007. Before that, there have been some activities in order to perceive the consequences of Basel II on Slovenian banking sector and an attempt of the regulator to discuss possible changes in the regulation of Slovenian banks.

Like in many developing countries (Powell 2004) the Slovenian banking sector also had the benefit of foreign bank entry. In many cases this has increased competition, efficiency and improved financial stability. These "internationally active" banks are precisely the ones that will be implementing the more advanced approaches of Basel II on a worldwide, consolidated basis (Powell 2004).

Basel II was primarily not written having small banks or small national banking markets in mind. However, the issues that Basel II raises will undoubtedly shape an important part of the dialog regarding the improvement of banking regulation and supervision going forward. Moreover, the spectrum of regulatory approaches, now encompassed in Basel II, is very wide indeed.

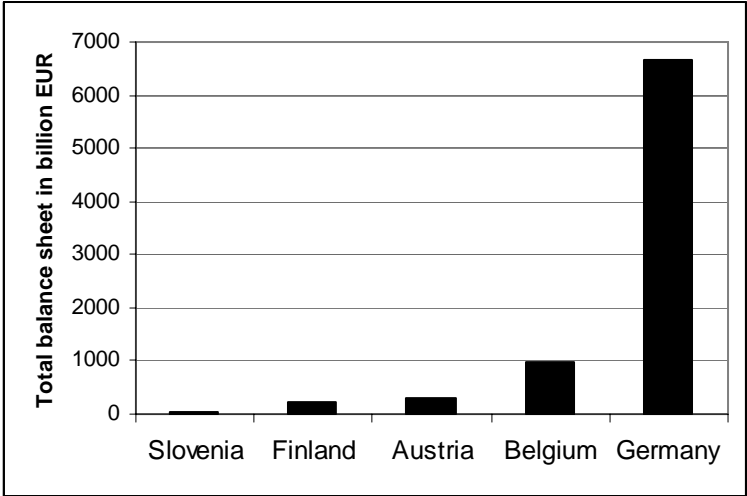
To estimate impacts of Basel II there have been quantitative impact studies made by Basel Committee for Banking Supervision (see BCBS 2006 and older QIS publications). Besides BCBS, the consulting and rating agencies (PriceWaterhouseCoopers 2004, Ernst&Young 2006) as well as the academic field and banks have done research studies in this field (Carling 2002, Majnoni et al. 2004, Berger 2004, Hakenes and Schnabel 2005, Keefe, Bruyette & Woods 2006).

The paper starts by describing the banking sector in Slovenia, which represents a small open transition economy. Current trends in the observed markets have a direct link to the process of implementing Basel II in Slovenia and may therefore be main reasons for the differences compared to the official Accord. The impact of Basel II on the banking sector in Slovenia is analyzed in the next section. We tried to gain an insight into Slovenian banks upon a survey. The analysis was conducted just three months before the implementation of Basel II. This may have been a more appropriate moment for the evaluation of Basel II consequences than the Slovenian Quantitative Impact Study (SiQIS) which was made in 2003, when banks were not yet intensively preparing for Basel II. It is also commented how the banking regulation could further be developed in Slovenia.

## 2. Banking and Credit Market of a Small Transition Economy

In Slovenia the whole market is small, so no bank can be big in terms of European banks. The total of balance sheets of all banks amounted on December 2006 only 33.8 billions of Euro (Slovenian Banking Association 2007) where the market leader has a market share of about 32 %. In the sense of economies of scale, available longest (time) data series and experiences, this bank could have the best position in the process of implementing Basel II. To gain an insight of the size let us compare this data to the size of some other European banking markets (see Figure 1).

**Figure 1:** Banking Sector Size in Selected EU Countries (Data for 2006)



Source: National Bankers' Associations

Finnish banks have the total balance sheet of 220 billions of Euro (end of 2006, The Finnish Bankers' association), Austrian banks 290 billions of Euro (end of 2006, Austrian Bankers' Association), Belgium banks have the total balance sheet of 970 billion of Euro (in year 2006, The Belgian Bankers' and Stockbroking Firms' Association (ABB-BVB)) and German banks 6663 billion of Euro (end of 2006, Association of German Banks).

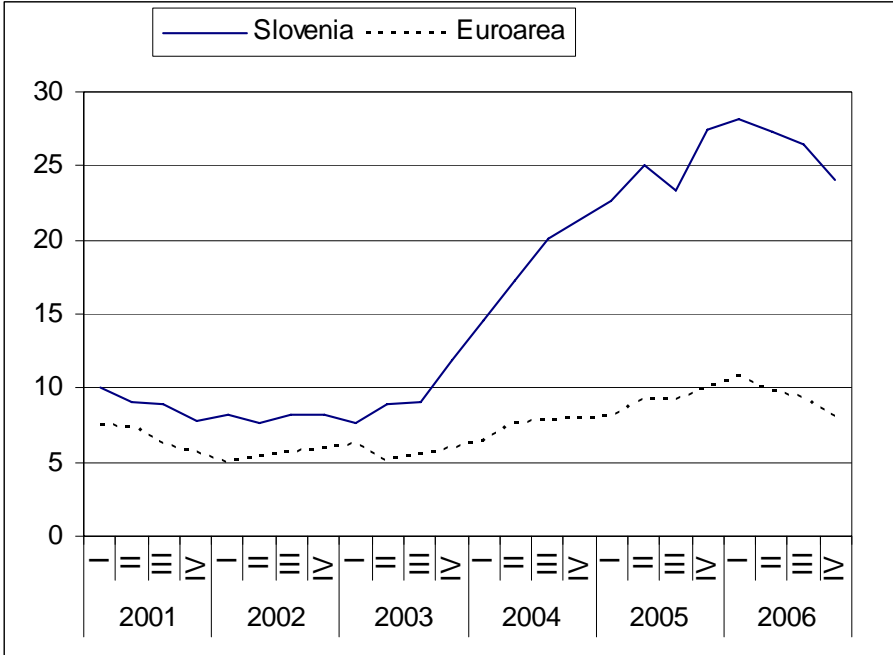
Credit institutions in Slovenia have in the recent years experienced a period of intensive growth in credit activity in corporate and retail financing. Growth in total assets is rising fast in Slovenian banking sector.

Last data for November 2007 show a 27.5% year-on-year growth. The main contribution of 88% to the increase in total assets came from loans to non-banking sectors. Banks financed their increase in assets in 2007 primarily by borrowing abroad. The trend of securities accounting for a declining proportion of assets continued in 2007, the figure falling to 17.5%, with banks maintaining secondary liquidity at around 13%.

Lending to non-banking sectors continues to grow. Year-on-year growth in loans to non-banking sectors approached 41% in November 2007. The largest contribution to this increase came from lending to non-financial corporations, households and nonresidents. Year-on-year growth in lending to non-financial corporations exceeded 37% in November. As in the last years, the main factors in the increase in loans were the high economic activity, and, to a certain extent, the financing of M&A activity via non-financial corporations and OFIs. Lending to OFIs was slower in last months of 2007, but the year-on-year growth rate was still just over 95%.

In Figure 2 we show the growth of retail credit activity in Slovenia compared to Euro area for recent years. Considering the current trends, Slovenian banks are in great temptation to neglect the proper risk management strategy and credit approval conditions in order to achieve continued credit growth.

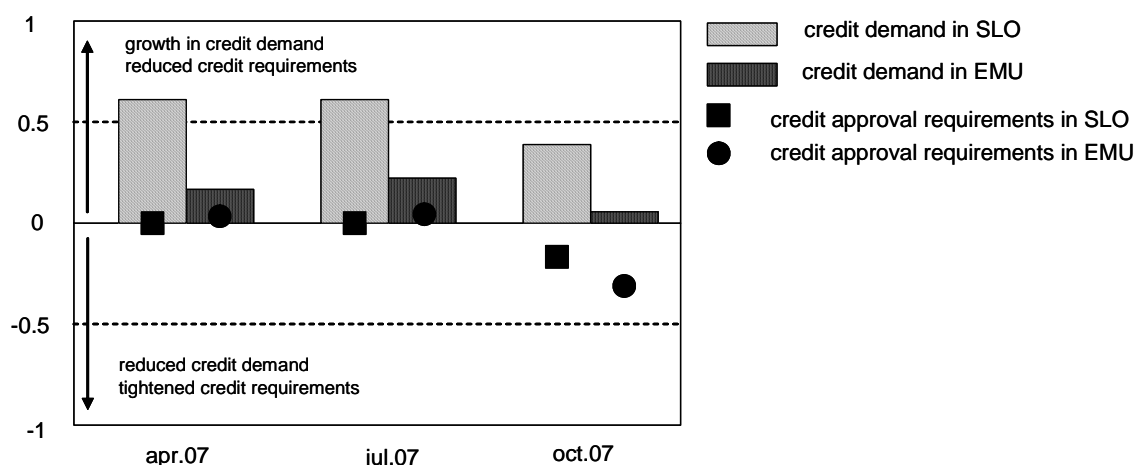
**Figure 2:** Year-on-year Increase (in %) of Retail Credit in Slovenia and Euro Area



Source: Bank of Slovenia 2007

The growth trend has continued in the year 2007. While banks in other Euro area countries have tightened the credit conditions due to financial crises in summer 2007, have Slovenian banks followed this trend only in smaller extend (Figure 3).

**Figure 3: Change in Credit Demand and Credit Requirements**



Source: Bank of Slovenia 2007

Despite the tighter conditions on international financial markets, Slovenian banks have mainly financed the credit activity by borrowing in the foreign financial markets since the level of domestic deposit savings does not represent enough accumulation for the credit demand. Liabilities to foreign banks have grown to 32% of the balance sheet total in September 2007. This has increased banks dependence and sensitivity to foreign financial markets (Bank of Slovenia 2007).

From the risk management point of view the risks of the stability of Slovenian banking sectors has grown in the last year. A global financial crisis and reduced confidence of financial market players has increased the liquidity risk of the banks. Credit risk has been intensified in line with growth in credit activity, which may have been encouraged by overoptimistic behavior. In the building and real estate industry companies have very high level of hired debts, what additionally increases the credit risk of banks exposures to these companies.

Market risk has been intensified with global crisis on financial markets but on the other hand also with overvalued listings on Slovenian stock exchange. Corrections have been taking place in the end of 2007 and beginning of 2008 in global financial markets but also in Slovenia.

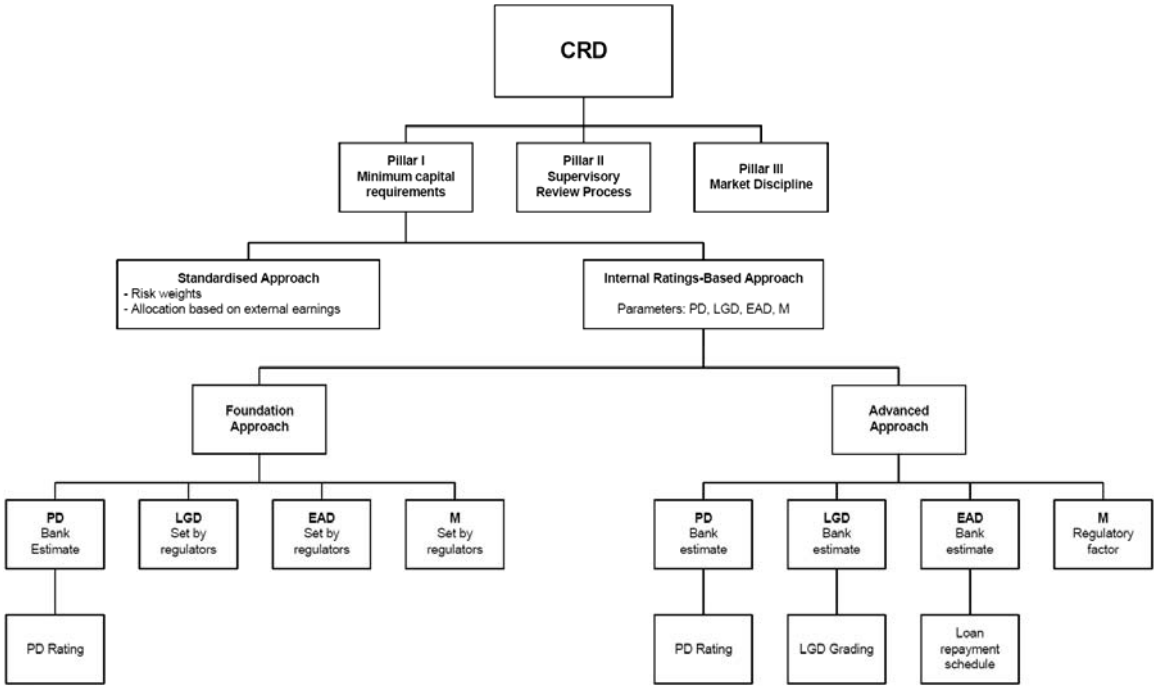
### 3. Comparison of the Slovenian Legislation and the Accord

The EU capital adequacy framework is in a large part based on the Basel II standards. The new Directive applies Basel II standards to all EU credit institutions or banks and to all investment firms authorized under the Investment Services Directive (ISD). As an EU member state Slovenia implemented Capital Requirements Directive (CRD) into national legislation. Therefore, Basel II rules are valid for all Slovenian banks as well. Slovenian banks are going to implement new capital requirements on 1<sup>st</sup> of January 2008 and they also had the chance to implement them already on 1<sup>st</sup> of January 2007 like banks in other countries.

Bank regulation has been increasingly using external credit ratings in recent years. For Slovenian banking sector, the revised international capital accord based on a more prominent role for credit ratings means another step in improving banking and risk management quality. In most European countries the coverage of bond issuance and company ratings by rating agencies is generally available to the public from a wide variety of sources, including the rating agencies themselves. Not only the banks internal risk tools will improve but also recently rating agencies have expanded their coverage to other debt products and have introduced variants or refinements of their traditional products. In some cases, such as ratings on structured debt, the concept of credit rating is essentially the same as before, although the debt product may be more complex.

Even though implementation of the Basel II framework continues to move forward around the globe there are some differences between the original Accord and national legislations. The same is true for Slovenia. The Basel II framework is based on a three-pillar structure (see Figure 4): minimum capital requirements (Pillar I), the supervisory review process (Pillar II), and market discipline (Pillar III). Apart from including operational risk as a new category of risk in the definition of risk-weighted assets, the Basle II and the European version, the Capital Requirements Directive (CRD), allow banks to use their own risk assessments in calculating their capital requirements.

**Figure 4:** The Structure of the Capital Requirements Directive (CRD) Framework



Note: PD=Probability of Default; LGD=Loss Given Default; EAD=Exposure at Default; M=Maturity

Source: Verband Deutscher Pfandbriefbanken

In what follows, we only focus on the first pillar. There are two approaches for calculating capital requirements: a standardized approach based on external ratings (i.e. banks using this approach have to riskweight according to the grids provided by the supervisor) and an internal ratings based approach

(IRB). Given that the IRB approach is expected to enable banks to lower their capital requirements, the majority of banks are anticipated to attempt to use this approach. In fact, even smaller savings banks will probably try to implement the IRB approach. Banks also have the opportunity of gradually refining their risk measurement systems towards the more advanced approaches. The IRB approach itself breaks down into a foundation approach and an advanced approach; the latter expected to only be used by banks with highly sophisticated risk management.

### **3.1 Credit Risk**

In Slovenian legislation there are two available approaches just like in the Accord under capital requirements for credit risk for banks: The Standardized and Internal Rating Based (IRB) Approach (Foundation and Advanced approaches). In both approaches the differences are small.

In the standardized approach the Accord lists risk weights according to the credit assessment, while for corporate credit assessment classes there are AAA to AA-, A+ to A-, BBB+ to BB-, Below BB- and Unrated. In Slovenia banks have a lot of exposures to Slovenian corporate bodies, which are small and medium sized and have therefore rarely an external rating. According to the CRD, the Slovenian regulator had published procedures for recognition of ECAI-s and mapping of their credit assessments. In the procedures, the mapping of credit assessments is based on a three-year cumulative default rate (three-year CDR) for each credit assessment. The Bank of Slovenia additionally includes some more information, like default definition, ten-years average of three-year cumulative default rate (CDR), target PD for each class if in use, significance level of default rate, definition of the rating methodology (point-in-time or through-the-cycle), transition matrices to finally map ECAI-s ratings and credit quality step in the standardized approach of national legislation.

There are no differences in the treatment of claims included in the regulatory retail portfolios. In the Slovenian regulation, just as in the official Accord, mortgage loans are excluded from the retail portfolio if they qualify for the treatment as claims secured by residential property. In the treatment of those claims there are differences in accuracy level of the formulation. Like most paragraphs in the Accord also those defining claims secured by residential property are broadly specified. The Accord says that the risk weight used should be 35 % if lending is fully secured by mortgage on residential property. The Accord adds that this weight should be used in accordance with strict prudential criteria, such as the existence of substantial margin of additional security over the amount of the loan based on strict valuation rules. The Accord advises the supervisors to increase the standard risk weight where they judge that the criteria are not met. The Bank of Slovenia has set the risk weight for claims in the part where they are secured by residential property at 100 %. Risk weight is set to 35 %, if the claim meets additional criteria which are the same as in the CRD – only one of the criteria is different. If the value of the secured exposure does not exceed 50 % of the market value of the property in question or 60 % of the mortgage lending value, banks may risk weight 35%. The difference to the Accord is when the loan-to-value ratio does not meet this precise criterion. The whole claim is weighted at 100, but a residential property as security exists. There are no other significant differences in the treatment of other claims.

Further on, in the Slovenian regulation more explicit definitions of categories of exposures are missing. One such example is the explicit definition for insurance companies, whether they are being treated like banks in the category of claims on institutions or like corporate bodies in the category of claims on corporate bodies. This question is clear in the original Accord. It says that claims on security firms may be treated as claims on banks provided these firms are subject to supervisory and regulatory arrangements comparable to those under the Basel II framework. Otherwise such claims should be treated as corporate bodies. In Slovenian legislation such clear definition is missing.

In some other points Slovenian regulation is even more severe than the CRD. One of such rules concerns conditions for including an exposure into the retail portfolio. In Slovenia, an individual retail exposure (or sum of the exposures of connected people) may not exceed 0,2 % of the total retail portfolio. This can be problematic for smaller banks or banks with small retail portfolios.

Under the internal rating based (IRB) approach for the credit risk there is a first difference in exposures categories. Both, the Accord and Slovenian legislation define categories of the exposure to corporate bodies, sovereigns, banks, retail and equity exposure. The Accord additionally defines the category of qualifying revolving retail exposure while the Slovenian legislation includes it as a sub-category of the retail portfolio. However, both the Accord and Slovenian legislation define three formulas to calculate risk weight in the retail portfolio. The difference between the three formulas is in correlation ( $R$ ), which is given for qualifying revolving retail exposures and mortgages but is being calculated for other retail exposures. In addition, the Slovenian legislation defines the categories of positions in securitization and other assets from non-credit exposures while the Accord has only one more category, which is eligible purchased receivables.

The Bank of Slovenia requires for a bank, which wants to implement the IRB approach gradually, to have at least 50 % of all exposures on the IRB approach on the day when the IRB approach is implemented.

Slovenian legislation continues to implement typical Basel II – language, which gives sometimes too much space for the interpretation. Banks are expecting further on more detailed explications from the Slovenian regulator. For example consider IRB approach where it speaks about the quality of the rating models (Jagric and Jagric 2007). The legislation says, the model should be as much unbiased as possible. When it speaks about the stress testing, it says that the bank should perform it on regular basis and that it should include the majority of the banks' portfolio. But when speaking about quantitative measures it is important that we all understand what little correlation is, unbiased in great extend, performing something regularly etc., in the same way.

### **3.2 Market and operational risk**

For Slovenian banks Basel II under the market and operational risk does not introduce that much effort as it does for the credit risk. However, there are differences in the Slovenian legislation compared to the official Accord. Slovenian regulation is broader, more precise and stricter. Let us examine a few cases through this section.

The Accord doesn't speak about the conditions under which the bank may apply rules on standardized and IRB approach for the trading book issues, too. Slovenian regulation sets contain several conditions: trading-book business usually does not exceed 5 % of the whole banks business activity, total position in trading-book usually does not exceed 15 million Euro and trading-book business never exceeds 6 % of the whole banks business activity and total position in trading book never exceeds 20 million Euro. Whenever a bank exceeds these criteria, the national regulator must be immediately notified and capital requirement must be calculated according to the rules set for market risk. However, it is still unclear what "immediately" means and the Slovenian banks have raised the question whether that meant "daily". The Slovenian regulation requires from a bank to clearly define the aim of the trading in her strategies and policies and defines how the bank can prove the trading aim.

In practice many regulatory requirements are unclear, but they are clear enough in the general Accord. Hereby this includes examples like the following. In the national legislation there are two different terms used, prompt and market exchange rate. We believe that it would be better if only one would be used. Another practical question is who should validate model assumptions according to the national legislation – is this an external expert or only an internal employee not involved in the model development process.

Operational risk is a new category or risk subject to capital requirements. There are three methods for calculating a bank's capital requirements for operational risk. Basic indicator approach: a bank's capital requirement to cover operational risk is equal to 15% of its average gross annual income over the previous three years. Standardized approach: a bank's gross income (three year average) is divided into eight different business lines. The capital charge is then calculated for each business line by multiplying the respective gross income by a factor (determined by the Basel Committee) assigned to that business line. The total capital requirement for operational risk under this approach is the sum of the individual capital requirements of these eight business areas. Advanced measurement approach: sophisticated calculation method, under which the operational risk charge is calculated on the basis of the banks' own internal operational risk management systems. The latter take into account, both actual internal and external loss data, as well as scenario analysis and factors relating to the bank's operating environment and internal controls.

Under the operational risk Slovenian legislation follows the accord with all approaches already laid there down. By providing a range of approaches, banks ought to select the one most appropriate to the bank's size, the complexity of its operations, and the nature of its risks. Basel II Operational Risk Framework requires from Slovenian banks to prepare, develop and implement suitable tools for operational risk management policies. The analysis of our survey, which will be described later on, indicates that Slovenian banks will mostly start with simple approaches and move to more advanced ones in the future. The banks mainly work on the collection of operational risk loss data and are starting with build and modeling of the appropriate database. Operational risk database should enable the bank to gain an efficient overview over all actual operational losses appearing in the bank and in that way help improve operational risk management. Designing of an appropriate database starts with the definition and identification of all types of operational risks which a particular bank is exposed to.

We can broadly conclude that deviations from the official Accord are small. Mainly they appeared as a consequence of deviations between EU Directive and the official Accord. Changes from the original Accord appeared due to specifics of the European banking sector. In the EU the main concern about the Basel II implementation is that no bank should suffer on the competitiveness due to Basel II. Differences in sizes between banks in the EU are huge. Basel II could set banks of different sizes into different favorable position. Hakenes and Schnabel (2005) discuss that the implementation of the IRB approach requires large initial investments in risk management technologies, which may deter small banks from choosing the IRB approach. In that case, only large banks profit from the reduction in capital requirements (and hence marginal costs) for safe loans in the IRB approach. This argument is very important for the Slovenian banking sector.

#### **4. Impact of Basel II on the Slovenian Banking Sector**

Besides the size of the banks there are a few concerns about implementing Basel II in Slovenia. Like in the USA (Berger 2004) and in the other EU-member states (ECB 2007) also in Slovenia banks (and governments) were concerned about the future of financing-position of small and medium-sized enterprises (SMEs) with bank loans. In Slovenia, 99,7 % of all companies fall into the category of SMEs. SMEs employ over 65% of all workers (Zupancic 2007). Expensive banks loans for SMEs would have an extremely negative impact on the national economy. The same is true for other European economies, since SMEs are a very important part of the European economy (ECB 2007). We can conclude that Slovenian regulation deviates just a bit more from the Accord than the CRD does. Slovenian banks could therefore have the need for further deviation from CRD in order to support SMEs lending activity.

Conducted Quantitative Impact Studies (QISs) presented by Basel Committee on Banking Supervision (BCBS) have shown that the more advanced approach the bank takes, the greater can be the reduction in required capital (BCBS 2006). Results from the Fifth QIS show that the retail mortgage portfolio contributes the most to the reduction in minimum required capital under the standardized and the IRB approaches (-6.3% to -7.6% for G10 Group 1 banks). Since there was no explicit capital charge for operational risk under Basel I, the highest increase is due to the new capital requirements for operational risk (5.6% to 6.1% for G10 Group 1 banks). For Group 1 banks under the IRB approaches, the other main contributing portfolios are corporate and SME retail (decreases) as well as equity (increase) (BCBS 2006). The results of BCBS's 5<sup>th</sup> QIS are summarized in Table 1.

**Table 1: Results of 5<sup>th</sup> BCBS QIS**

	<b>Change in minimum required capital relative to Basel I, in %</b>			
	Standardized approach	FIRB approach	AIRB approach	Most likely approach
<b>G10 Group 1</b>	+1.7	-1.3	-7.1	-6.8
<b>G10 Group 2</b>	-1.3	-12.3	-26.7	-11.3
<b>CEBS Group 1</b>	-0.9	-3.2	-8.3	-7.7
<b>CEBS Group 2</b>	-3.0	-16.6	-26.6	-15.4
<b>Other non-G10 Group 1</b>	+1.8	-16.2	-29.0	-20.7
<b>Other non-G10 Group 2</b>	+38.2	+11.4	-1.0	+19.5

Source: BCBS 2006

In 2003 the Bank of Slovenia and The Bank Association of Slovenia have conducted a Slovenian Quantitative Impact Study (SiQIS). The study shows data from September 9, 2003. The study tried to estimate the effect of the Basel II implementation in Slovenian banks. The study was made before banks had all the necessary knowledge and available data about Basel II. Out of these reasons SiQIS implied only the simplest approaches, which are the standardized approach for credit risk and simple approach for the operational risk. Big challenge for the banks was data gathering, since data requirements are bigger and partly differ from what was available until SiQIS in the bank data warehouses or other databases. Upon the results of the three scenarios, the Bank of Slovenia tried to identify which national discretions would be the most appropriate for the Slovenian banking sector. According to SiQIS capital requirements for Slovenian banks would raise on average. Since other impact studies have shown that banks would benefit from the use of advanced approaches (BCBS QISs 2006 and older, PriceWaterhouseCoopers 2004) we can expect Slovenian banks to use the IRB approach and other more sophisticated approaches in the future. The results of SiQIS are summarized in Table 2.

**Table 2: Results of the SiQIS**

<b>SCENARIO</b>	<b>Change in capital requirements under the Standardized approach relative to Basel I, in %</b>	
	<b>Only on credit risk</b>	<b>On all risks</b>
<b>Optimistic</b>	-13.92	-0.60
<b>Pessimistic</b>	+9.80	+19.98
<b>Realistic</b>	-0.53	+11.02

Source: Bank of Slovenia and Bank Association of Slovenia 2003

Slovenian banks had a lot of concerns about the successful implementation of Basel II in the time period before 2006. Some of the reasons were concurrent projects in all Slovenian banks, the adaptation of Euro on 1.1.2007 and International Financial Reporting Standards (IFRS) implementation. Small banks

suffered under time and resource deficit for appropriate preparing on Basel II. Another reason for skepticism, especially concerning the IRB approach, was that there was little practice in Slovenian banks with econometric models for rating assessments and that data storage in most of the banks was not yet compliant with the IRB requirements. Most banks will first implement more simple approaches, like standardized approach for the credit risk and go for more sophisticated, like IRB, later on.

In 2006 the Bank of Slovenia published draft legislation and invited Slovenian banks to the discussion. Slovenian banks actively took part in the creation of the said legislation within the Bank Association of Slovenia by participating in the making of comments and observations related to the decisions of the Bank of Slovenia. Some comments by the banks were implemented into the new legislation while for some questions the Bank of Slovenia gave explanations. Slovenian banks mostly had also comments about what would be more appropriate for the Slovenian market; however the Bank of Slovenia is obligated to implement CRD at minimum.

Banks' concerns about the standardized approach were mainly about the availability of external credit ratings approved by the bank of Slovenia for obligors of Slovenian banks. In the SiQIS Slovenian banks estimated that only 1 % of Slovenian companies in banks portfolios have an appropriate external credit rating. Few months before the implementation of Basel II in Slovenia, banks mostly solved this problem with help of the Bank of Slovenia, which finally offered issue rules for external rating agencies being accepted as ECAI.

If we consider the IRB approach for the credit risk, the need of changing for Slovenian banks would be much greater than the one for the standardized approach. Mainly because banks are at the moment not experienced enough in the sophisticated quantitative risk measure required in the IRB approach. However, this is just a transitional problem. Banks are mostly aware of that and are not trying to simplify the regulation but rather to learn about the modern risk management techniques and their benefits and could in few years improve competitiveness in this sense, too.

We tried to estimate implications of Basel II on the Slovenian banking sector upon a survey. The analysis was conducted in August and September 2007, which is only 3 months before the full implementation of Basel II. Slovenian banks did actively prepare for Basel II implementation. We believe that the results reflect the implications of the Basel II for the banks. There are 21 banks or banking groups present at the Slovenian market. We received answers to our questionnaire from 8 banks, which have together a market share of about 71 %. Therefore the answers to our questionnaire, despite the small number of banks, are considered to be representative enough to form statements about the Slovenian market.

Basel II has had (and further on will have) great implications for the Slovenian banking sector. Banks in 75 % estimate the impact of Basel II as positive. The rest estimates it as negative or both. As a positive effect, the banks listed, among others: increased transparency, improved risk management practices, bigger impact of bank on capital requirements, increased objectivity at business decisions, stimulation of research, development and adaptation of most sophisticated modern risk management techniques.

However there are negative effects reported by Slovenian banks as well. All Slovenian banks face extremely high costs associated with Basel II implementation, economies of scale could not yet appear as time horizon is too short for now and all banks are relatively small when comparing to banks in other EU economies. Smaller banks need more time in order to estimate if advanced approaches pay off at all and if so, to properly develop and implement them. Besides direct costs, the Slovenian banks report high opportunity costs. Slovenian banks don't have highly trained analytical/risk departments which exclusively work on Basel II implementation. On the other hand on the labor market there are only a small number of candidates with proper knowledge and experience to jump into risk management teams of banks right ahead.

The knowledge of sophisticated advanced risk management techniques was in most of the Slovenian banks very poor before Basel II. 62% of banks estimate current knowledge of sophisticated risk management techniques in Slovenian banking area as bad, given the score 2, on the scale from 1 to 4, taking 1 as the worst and 4 as the best. Work on risk management techniques was mostly an always postponed task. Now, with Basel II banks have an outside push to improve their internal risk policies and thereby the level of understanding full risks, which occur in banking. All of the banks, which answered to our questionnaire, have already separated and independent risk management unit or department, where employees devote themselves to risk management tasks only. For banks, embedding Basel II entails significant cultural change. This is highlighted by the fact that the respondents believe that internal stakeholders, and in particular senior management and front-office staff, require additional education on Basel II.

Before preparation projects for Basel II and final Basel II implementation, 25% of banks have been already using (some) advanced risk management techniques. Banks which have already been using advanced techniques report that Basel II doesn't represent an important change in their internal risk management policy. Banks which have not been using advanced techniques before or used them only in part, would in 83 % develop them in the future. Even if Basel II didn't have the chance of using advanced risk management techniques for estimating regulatory capital requirements the banks would probably develop some advanced tools of risk management because of their internal needs (in 66 %).

Overall cost estimates for implementing Basel II continue to rise in banks. Based on current projections, respondents predict a substantial increase in implementation costs due to greater operational challenges around the management and production data. However, 75% of banks consider high implementation costs as an investment in the business improvement and competitiveness and fulfillment of regulatory requirement at the same time and not only as unnecessary costs, which are caused to the banks by the regulator. Other 25 % of banks see costs of implementing Basel II as unnecessary costs, which are caused to the banks by the regulator. 87 % of banks report that Basel II did / or will in the near future cause important changes in the daily business practice. Estimated 62% of the banks report that the Basel II requires a change in the business policy for the groups of clients (Credit lending policy, pricing etc.). In those banks business policy is expected to be changed in the near future. 37% of banks named SME's portfolio. Capital directive treats this portfolio more favorable in new regulative compared to the old one. Banks noticed this business opportunity very soon and therefore already today change their business

policy on SME's. Other banks didn't give answers to this question or they do not expect any important changes in business policy. 37 % of banks report changes in trading book policy due to Basel II as well.

Half of Slovenian banks estimate the cooperation of Bank of Slovenia with banks in the field of implementation of Basel II up to now as good (with score 3 on the scale from 1 to 4, where 4 is the best). The other half estimates the cooperation as bad or very bad up to now. Slovenian banks in 62 % do not expect the current regulation to change importantly. According to the Bank of Slovenia, the Slovenian capital regulation will change for the first time already before the end of 2007. Changes in the regulation are expected to be small, for now and for the near future.

## **5. Concluding Remarks**

The Basel II is at the forefront of executive thinking. The potential benefits of more timely and improved risk data will probably take several years to become completely understood. The impact on individual institutions will be driven by their level of sophistication in risk-based capital assessment, portfolio management and approach to risk-based pricing. For the most advanced entrants into the new framework (large domestic banks, or banks owned by large foreign banks), significant benefits may be gained from better data quality and the closer alignment of risk and finance functions. Basel II will certainly have major business impacts on banks themselves and on the Slovenian financial market.

The Slovenian national legislation incorporates EU Capital Requirements Directive which is based on Basel II standards. There are some little differences in the Slovenian national legislation and the original Accord. Differences could be identified, but they are very small. Since the Bank of Slovenia will introduce slight changes into current legislation, we expect those differences to disappear or be diminished, especially if they aren't in favor of banks.

We would expect even more differences in the Slovenian capital requirements regulation because of special features of the Slovenian banking market. This market is very small compared to other European economies and therefore the size of Slovenian banks is smaller too. Slovenian banks claim that implementation of the IRB approach requires large initial investments in risk management technologies. This could deter small banks from choosing the IRB approach or they face high costs in the beginning, which means high marginal costs for safe loans in the IRB approach.

We tried to estimate the implications of Basel II on the Slovenian banking sector upon a survey. Majority of banks estimate the impact of Basel II as positive. Besides the direct costs, the Slovenian banks report high opportunity costs. Banks which did not use advanced techniques before Basel II, or did it only partially, would develop them in the future. As the results indicate, the implementation of Basel II will require major changes in the banks. Therefore, help of the central bank would be extremely important. However, only half of Slovenian banks estimate the cooperation of Bank of Slovenia with banks in the field of implementation of Basel II up to now as good. We believe, that due to the size and structure of the

banking sector in Slovenia, the Bank of Slovenia should make more effort to support the implementation of the Basel II.

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